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MRSA: Super Staff

The TV Series

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UNDERSTANDING MRSA

Methicillin-resistant staphylococcus aureus (MRSA) is a type of bacteria that does not respond to penicillin, methicillin or other conventional antibiotics, making it more difficult to treat.

Staphylococcus aureus, often referred to simply as staph, is an extremely common bacteria. Many people carry it on their skin or inside the nose, where it usually does not cause any problems. But if staph gets into the body through a medical procedure or even a minor break in the skin, it can cause an infection.

Staph is often to blame for skin infections in healthy people and is a major cause of serious bloodstream, lung or surgical site infections in hospital patients. These infections are treated with antibiotics, but some strains of staph have become resistant, meaning they no longer respond to common medications.

The Evolution of MRSA

When penicillin was introduced in the 1940's, it was highly effective against staph infections. Unfortunately, staph quickly adapted, forming new strains that did not respond to penicillin.

Researchers then created the antibiotic methicillin in hopes of treating the new strains of staph. Within a few years, staph found a way around methicillin as well.

The result is methicillin-resistant *staphylococcus aureus* or MRSA. This form of staph is not only resistant to penicillin and methicillin, but also to many other antibiotics including oxycillin and amoxicillin.

MRSA was once rare, making up less than one percent of staph infections seen in hospitals. But the Centers for Disease Control and Prevention has documented a dramatic increase in recent years. The latest data suggests that 65 percent of staph infections in intensive care units are now caused by MRSA.

The CDC recognizes two main categories of resistant staph infections: healthcare-associated MRSA and community-associated MRSA. Both forms are on the rise throughout the U.S.

Healthcare-Associated MRSA

In hospitals, nursing homes and other healthcare facilities, staph may be transmitted from patient to patient by the hands, clothing or instruments of healthcare workers. The bacteria can get inside patients and infect the bloodstream, urinary tract, lungs or other organs through various routes, including:

- Intravenous (IV) lines
- Urinary catheters
- Dialysis catheters
- Surgical wounds
- Ventilator tubes

DIAGNOSIS & MANAGEMENT

According to the CDC, staph infections are a well-known risk for hospital patients, particularly those having surgeries or other invasive procedures. Unfortunately, the proportion of those infections caused by MRSA is growing. The CDC now records about 125,000 hospital discharges associated with MRSA each year – that’s about 1 in every 250 hospital discharges.

Those most at risk for healthcare-associated MRSA include:

- Intensive care patients
- Patients having surgery or other invasive procedures
- Patients with a compromised immune system
- Community-Associated MRSA

Community-Associated MRSA refers to MRSA infections in healthy people who have had no recent exposure to the healthcare system. These infections most often involve the skin or soft tissue. Symptoms may include:

- A pimple or boil with redness, swelling or pus
- A sore that turns black in the center
- Feeling systemically unwell
- A sore that is mistaken for a spider bite

Community-associated MRSA spreads through skin-to-skin contact or the sharing of contaminated items, such as towels or razors. While it can strike anyone, the CDC has recorded outbreaks in certain populations, including:

- Children
- Military recruits
- Prison inmates
- Athletes

Researchers have determined that community-associated MRSA is not the same strain as the healthcare variety. Community-associated MRSA is only resistant to methicillin and its close cousins, while healthcare-associated MRSA is resistant to many other antibiotics. In addition, the community strains produce a toxic material that can kill off tissue at the site of infection.

The vast majority of MRSA cases in the U.S. are healthcare-related. Community-associated cases make up only 12 percent of total MRSA infections.

Diagnosis

MRSA can be detected through a procedure called a culture. A specimen from the patient – for example, pus from a wound – is cultured and viewed under a microscope. If staph is present, a medical technologist tests the bacteria’s response to certain antibiotics to determine whether it is MRSA.

Treatment

Treatment for MRSA may include incision and drainage of the infected area and/or antibiotic therapy, depending on the type and location of the infection. Because healthcare-associated MRSA is resistant to a wide variety of antibiotics, doctors have only a few medications to choose from. Community-associated MRSA responds to a broader range of antibiotics.

DIAGNOSIS & MANAGEMENT (CON'D)

The chances of recovery depend on the overall health of the patient, the type of infection and how soon it is diagnosed and treated. Mortality is highest for healthcare-associated MRSA, particularly when the infection spreads to the bloodstream or vital organs. Community-associated MRSA usually causes skin or soft tissue infections that respond well to treatment.

Prevention

Because resistant staph infections can be difficult to treat, public health officials are stressing the importance of prevention. To reduce the spread of MRSA in healthcare settings, the CDC recommends healthcare professionals take the following precautions:

- Wash hands between every patient contact
- Wear gloves and disposable gowns
- Disinfect stethoscopes, blood pressure cuffs and other equipment after each use
- Move patients diagnosed with MRSA into private rooms

Patients can help protect themselves by encouraging their healthcare providers to follow these guidelines and by discussing precautions against MRSA before having surgery or other invasive procedures.

There are also steps people can take to protect themselves from Community-Associated MRSA:

- Wash hands regularly with soap and water
- Avoid touching other people's wounds
- Avoid sharing personal items such as razors
- Use antibiotics only when necessary

Tackling Bacterial Resistance

Germs like staph are remarkably adaptable – the more they are exposed to a particular antibiotic, the sooner they find a way around it. This means powerful antibiotics become less and less effective the more we use them. Public health officials are calling on doctors and patients to work together to preserve the effectiveness of antibiotics by using them only when necessary.

Experts stress that taking antibiotics for a cold or other viral infection won't make you better and could contribute to the growing problem of bacterial resistance. Using antibiotics more cautiously will help ensure that they remain effective against serious infections.

FREQUENTLY ASKED QUESTIONS

Q What is a staph infection?

A Staph is short for staphylococcus aureus, a common bacteria. Staph can cause skin infections in healthy people and is a major cause of serious bloodstream, lung or surgical site infections in hospital patients.

Q What is MRSA?

A MRSA stands for methicillin-resistant staphylococcus aureus. It is a type of staph that does not respond to penicillin, methicillin or other conventional antibiotics, making it more difficult to treat.

Q Who is at risk for MRSA?

A Most cases of MRSA affect patients in hospitals, nursing homes or other health-care facilities. Those most at risk are intensive care patients and people undergoing surgery or other invasive procedures. About 12 percent of cases are community-associated, meaning they occur in otherwise healthy people.

Q How common are MRSA infections?

A According to the CDC, about 1 in 250 hospital discharges is associated with MRSA.

Q What is the difference between healthcare-associated MRSA (HA-MRSA) and community-associated MRSA (CA-MRSA)?

A There are several important differences:

HA-MRSA strikes patients in healthcare facilities, while

CA-MRSA strikes healthy people in the community.

HA-MRSA infects surgical wounds, the bloodstream, lungs and other organs.

CA-MRSA usually causes skin and soft tissue infections.

HA-MRSA is resistant to many antibiotics.

CA-MRSA is resistant only to methicillin and closely related antibiotics.

CA-MRSA produces a toxin that can destroy tissue.

Q How does healthcare-associated MRSA spread?

A MRSA may be transmitted from patient to patient by the hands, clothing or instruments of healthcare workers. The bacteria can get inside the patient through surgical incisions, IV lines, urinary catheters or ventilator tubes.

FREQUENTLY ASKED QUESTIONS

Q How does community-associated MRSA spread?

A CA-MRSA spreads through skin-to-skin contact or the sharing of contaminated items, such as towels or razors. While it can strike anyone, the CDC has recorded outbreaks in children, military recruits, prison inmates and athletes.

Q What do MRSA skin infections look like?

A MRSA skin infections may look like a pimple or boil with redness, swelling and pus. Sores may turn black in the center, causing them to be mistaken for a spider bite.

Q Are MRSA infections treatable?

A Yes. Treatment may include incision and drainage along with a course of antibiotics. CA-MRSA responds to a wider range of antibiotics than HA-MRSA.

Q How can I avoid getting MRSA?

A Wash your hands often, don't touch other people's wounds or share personal items, such as towels or razors. If you are undergoing a medical procedure or hospital stay, make sure your healthcare providers practice good hygiene.

Q Why did staph become resistant to methicillin and other antibiotics?

A Staph is highly adaptable. The more it is exposed to a particular antibiotic, the sooner it becomes resistant. For this reason, public health officials stress that antibiotics should be used only when necessary.

DATA, RESOURCES, HOTLINES, PUBLICATIONS and MEDIA CONTACTS

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For a DVD copy of a 30 minute documentary style program on "MRSA" call 1-888-380-6500 or visit.

www.healthybodyhealthymind.com

To watch on television, consult your local public television station for air-times in your area.

